BRUHAT BENGALURU MAHANAGARA PALIKE

(YELAHANKA DIVISION)

Name of Work

Improvements to roads, drains and other developmental works at Akshaya, Tirumala Nagar, Attur layout, Santhosh nagara, Muneshwara layout, Sri Sai layout, B sector and surrounding areas in ward No 03 & 04 of Yelahanka Division under Amruth Nagarothan Grants. (PACKAGE No-03)

FOURTH AND FINAL BILL

PMC CERTIFICATE

Package Amount: 21.35 Cr 2135 lakhs.

Project Management Consultancy:

Ninetech Infra Solution Pvt Ltd.

:#14, 3rd Floor, Hithaa complex,

80 feet Ring Road (Kengeri),Nagadevanhalli,

BENGALURU – 560056, Karnataka.

Agency:

Sri K. Venkat Raju

NINETECH

INFRA SOLUTIONS PVT LTD

Dear Sir,

"PMC CERTIFICATE AND INSPECTION REPORT"

Subject: Regarding Inspection Report for the below mentioned work.

Name of work:-Improvements to roads, drains and other developmental works at Akshaya, Tirumala Nagar, Attur layout, Santhosh nagara, Maneshwara layout, Sri Sai layout, B sector and surrounding areas in ward No 03 & 04 of Yelahanka Division under Amruth Nagarothan Grants. (PACKAGE No-03)

Sl. No	Description of work	Unit	Qty.	Remarks
1	Removing and Resetting of Footpath Slab and pointing in C.M (1:3) (Approved Rate)	Sqm	0.00	
	Above 125%	Sqm	294.23	Work done upto the Billed Quantity and the Quality is Satisfactory
2	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such similar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work.Loading and Unloading of Stone Boulder/Stone aggregates/ Sand/Kankar/Moorum (Tipper 5.5 m3)	Cum	518.70	Work done upto the Billed Quantity and the Quality is Satisfactory
3	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork shall be paid separately) Mix 1:3:6 (M10) Using 40 mm nominal size graded crushed coarse aggregates	Cum	127.65	Work done upto the Billed Quantity and the Quality is Satisfactory
5	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately) M20 Design Mix Using 20 mm nominal size graded crushed coarse aggregates	Cum	11.40	Work done upto the Billed Quantity and the Quality is Satisfactory
6	Providing and fixing precast reinforced cement concrete covering slabs of 10Cm thick made of M20 with OPC cement,with 20mm and down size graded granite metal coarse aggregate @0.70 mixed, Inculding providing and removing centering, shuttering, strutting propping etc., for edges of slabs with TMT steel (Fe500) cost of all materials, labour, all lead and lift, HOM of machinery, curing, including cost of reinforcement etc., complete as directed by the Engineer in charge of the work	Sqm	245.78	Work done upto the Billed Quantity and the Quality is Satisfactory
8	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. Mix 1:3:6 (M10) Using 20 mm nominal size graded crushed coarse aggregates	Cum	29.30	Work done upto the Billed Quantity and the Quality is Satisfactory

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9	Providing and fixing pre cast solid cement concrete kerb stones made out of M20 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting including formwork, curing, including cost of materials, labour charges of machinery, loading and unloading, lead and lift, transportation etc.,complete as directed by the Engineer in Charge of the work (Approved Rate)	Nos	1256.00	Work done upto the Billed Quantity and the Quality is Satisfactory
10	Painting two coats after filling the surface with synthetic enamel paint in all shades on new plastered concrete surfaces	Sqm	1708.81	Work done upto the Billed Quantity and the Quality is Satisfactory
11	Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work	Cum	418.22	Work done upto the Billed Quantity and the Quality is Satisfactory
	Above 125%	Cum	2760.20	Work done upto the Billed Quantity and the Quality is Satisfactory
12	Construction of Granular Sub-Base of required grading as per design mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401 .	Cum	954.62	Work done upto the Billed Quantity and the Quality is Satisfactory
	Above 125%	Cum	289.81	Work done upto the Billed Quantity and the Quality is Satisfactory
13	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader to sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density	Cum	772.21	Work done upto the Billed Quantity and the Quality is Satisfactory
	Above 125%	Cum	973.03	Work done upto the Billed Quantity and the Quality is Satisfactory
14	Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means.	Sqm	7600.13	Work done upto the Billed Quantity and the Quality is Satisfactory
15	Providing and applying tack coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.20 kg/m2 on the prepared bituminous surface cleaned with mechanical broom	Sqm	17254.48	Work done upto the Billed Quantity and the Quality is Satisfactory
16	Providing and laying Dense Graded Bituminous Macadam with 40/60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects.	Cum	518.96	Work done upto the Billed Quantity and the Quality is Satisfactory
17	Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 per cent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects.	Cum	690.18	Work done upto the Billed Quantity and the Quality is Satisfactory

Executive Engineer
Division Material Management
B.B.M.B. Barnala-148

18	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/ m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015 The finished surface to be level, uniform and free from streaks and holes.	Sqm	420.77	Work done upto the Billed Quantity and the Quality is Satisfactory
19	Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 m3 in volume and stack piling at designated locations and disposal of dismantled materials and stacking serviceable and unserviceable materials separatel	Cum	433.11	Work done upto the Billed Quantity and the Quality is Satisfactory
20	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork shall be paid separately) Mix 1:5:10 Using 40 mm nominal size graded crushed coarse aggregates	Cum	320.84	Work done upto the Billed Quantity and the Quality is Satisfactory
21	Providing and constructing un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base, with 43 grade cement or any other type as per Clause 1501.2.2 M30 (Grade), coarse and fine aggregates conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a concrete mixer of not less than 0.2 cum capacity and appropriate weigh batcher using approved mix design, laid in approved fixed side formwork (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the formwork as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including construction joints, , primer, sealant , curing of concrete slabs for 14.. days, and water finishing to lines and grade as per drawing and technical specification clause 1501 with all lead, lifts, loading & unloading charges, cost and conveyance of all materials, labour, equipments etc., complete, as per the directions of the Engineer-in-charge of the work.	Cum	320.84	Work done upto the Billed Quantity and the Quality is Satisfactory
22	Providing and laying heavy duty cobble stones 60mm thick interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per m2 over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level , including cost of materials, labour and Usage charges of machinery complete as per specifications.	Sqm	785.62	Work done upto the Billed Quantity and the Quality is Satisfactory
23	Cost of Haulage Excluding Loading and Unloading Taking output 10 t load and lead 10 km = 100 t.km	t.Km	5307.06	Work done upto the Billed Quantity and the Quality is Satisfactory
27	Providing Size Stone masonry with hard stone in foundation & plinth with Cement mortar 1:6(1 cement : 6 coarse sand)	Cum	52.46	Work done upto the Billed Quantity and the Quality is Satisfactory
	Above 125%	Cum	2.47	Work done upto the Billed Quantity and the Quality is Satisfactory
29	Providing Thermo-Mechanically Treated bars of grade Fe-500D or more Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position, binding and anchoring to adjacent members wherever necessary complete as per Design including cost of material, labour, usage charges complete as per specifications. (The laps and wastages shall not be measured separately)	Kgs	26.86	Work done upto the Billed Quantity and the Quality is Satisfactory
31	Providing and constructing load bearing wall with Solid Concrete blocks of size 400x100x200mm having block density more than 1800kg/m3 and minimum compressive strength of 4.00 N/mm2 conforming to IS 2185 (Part - I) - 2005 and constructed with CM 1:4 as per IS 2572:2005 including cost of all materials, labour, scaffolding and curing, usage charges of machinery etc complete as per specifications	Sqm		

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	Above 125%	Sqm	150.24	Work done upto the Billed Quantity and the Quality is Satisfactory
33	Providing Honne wood frames of doors, windows, clerestory windows, ventilators and other frames, wrought, framed or assembled including making plaster groves (excluding cost of cement concrete and side clamps), but including cost of materials, labour, usage charges complete as per specifications.	Sqm		
	Above 125%	Sqm	1.83	Work done upto the Billed Quantity and the Quality is Satisfactory
35	Providing and fixing flush door shutter made out of solid core block board type, well seasoned , chemically treated hard wood battens and internal frame with minimum 45 mm wide wooden frame alround door shutters covered with cross bonded wooden sheets (core veneer) hot pressed and fastened on both sides of the door using liquid phenol formaldehyde resin as per IS specificataons 2202 (part-I) 1991 from manufacturer complete as per specification. 30 mm thick both side commercial	Sqm	27.12	Work done upto the Billed Quantity and the Quality is Satisfactory
36	Providing & fixing of 2-track x 2-panel sliding windows made out of multi chambered UPVC(Matching to RAL-9016) sections and with minimum TiO2(Titanium Dioxide) at 6 PHR with TPE (Thermo Plastic Elastomer) and lead free, gaskets -grey color having isolated drainage and reinforced with Galvanized Iron profile through-out the window frame. The outer frame having an overall size of 44mm width x 40mmheight with reinforcement of 1mm thickness and Sash with overall size of 27mm X 53mm with UPVC honeycomb structure inside in lieu of GI reinforcement. Coextruded Glazing bead for fixing of glass shall be of size 9.5mm x 21.5mm. Windows shall be provided with 5mm plain float glass, standard hardware& single point locking system with Crescent Locks. Wall thickness of frame & sash shall be of 2 mm.Maximum possible size – 1219mm x 1219mm. (The cost is inclusive of all fixtures and separate charges for minor F&Ps shall not be made)	Sqm	21.96	Work done upto the Billed Quantity and the Quality is Satisfactory
37	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete. Fixed to steel windows by welding	Sqm	271.32	Work done upto the Billed Quantity and the Quality is Satisfactory
38	Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6 mm angle iron and 3 mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer. Using M.S. angels 40x40x6 mm for diagonal braces including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge	Sqm	11.81	Work done upto the Billed Quantity and the Quality is Satisfactory
	Above 125%	Sqm	5.20	Work done upto the Billed Quantity and the Quality is Satisfactory
39	Providing 15 mm cement plaster on the rough side of single or half brick wall of mix 1:4 (1 cement: 4 fine sand) including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.	Sqm	0.00	Work done upto the Billed Quantity and the Quality is Satisfactory
	Above 125%	Sqm	15.96	Work done upto the Billed Quantity and the Quality is Satisfactory
40	Providing 20 mm cement plaster of mix 1:4 (1 cement: 4 fine sand) to brick/stone masonary including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.	Sqm	314.60	Work done upto the Billed Quantity and the Quality is Satisfactory

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Assistant Executive Engineer
S.E.S.O.E. Dharwad-10A

41	Providing and laying flooring and steps fine machine polished granite stone slabs 20 mm thick on cement mortar bed 1:6, 20 mm thick, and joints finished with cement mortar 1:1 over existing cement concrete bed including cost of materials, mortar, labour, curing complete as per specifications	Sqm	285.11	Work done upto the Billed Quantity and the Quality is Satisfactory
	Above 125%	Sqm	38.48	Work done upto the Billed Quantity and the Quality is Satisfactory
42	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick bed of cement mortar 1:4 (1 Cement : 4 Coarse sand), jointing with grey cement slurry @ 3.3 kg/ m2 including pointing the joints with white cement and matching pigments etc., complete	Sqm	24.75	Work done upto the Billed Quantity and the Quality is Satisfactory
43	Providing skirting, dadooing, risers of steps with white glazed tiles 6mm thick on 10mm thick cement plaster 1:3 and jointed with white cement slurry over existing rough plaster surface using glazed tiles of approved make and size including cost of materials, labour, complete as per specifications	Sqm	55.57	Work done upto the Billed Quantity and the Quality is Satisfactory
44	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade :Two coats on new work after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge	Sqm	943.83	Work done upto the Billed Quantity and the Quality is Satisfactory
	Above 125%	Sqm	51.27	Work done upto the Billed Quantity and the Quality is Satisfactory
45	Providing White washing with lime to give an even shade :New work (three coats) with lime of approved quality, including cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge.	Sqm	599.38	Work done upto the Billed Quantity and the Quality is Satisfactory
46	Finishing walls with Acrylic Smooth exterior paint of required shade :New work (Two coat applied @ 1.67 ltr/10 m^2 over and including priming coat of exterior primer applied @ 2.20 kg/10 m^2) with paint of approved quality to give an even shade, after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge.	Sqm	599.38	Work done upto the Billed Quantity and the Quality is Satisfactory
47	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :Two coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge.	Sqm	18.00	Work done upto the Billed Quantity and the Quality is Satisfactory
48	Providing and fixing chromium plated brass handles of 100/125 mm with necessary screws etc. Complete	Nos	14.00	Work done upto the Billed Quantity and the Quality is Satisfactory
50	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. Complete 250x10mm	Nos	8.00	Work done upto the Billed Quantity and the Quality is Satisfactory
51	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40 mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and making and making good the walls and floors wherever required : W.C. pan with ISI marked white solid plastic seat and lid	Nos	6.00	Work done upto the Billed Quantity and the Quality is Satisfactory

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52	Providing and fixing white vitreous china laboratory sink with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P brass waste and 40mm C.P. brass trap with necessary C.P. brass unions complete, including painting of fittings and brackets, cutting and making good the wall wherever required Size 600x450x200 mm	Nos	4.00	Work done upto the Billed Quantity and the Quality is Satisfactory
53	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350 mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. cutting and making good the walls and floors wherever required Single half stall urinal with 5 litre P.V.C. automatic flushing cistern	Nos	2.00	Work done upto the Billed Quantity and the Quality is Satisfactory
54	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in charge. Concealed work, including cutting chases and making good the walls etc. 20mm nominal dia pipes	m	11.25	Work done upto the Billed Quantity and the Quality is Satisfactory
	Above 125%	m	38.75	Work done upto the Billed Quantity and the Quality is Satisfactory
57	Supplying PVC ringfit pipes conforming to IS 4985:2000 with latest amendments and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading unloading at both destinations and cuts of pipes wherever necessary including jointing of PVC pipes and specials (excluding cost of specials) with jointing of approved type, with all labour with all lead & lift including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing) etc. for:PVC pipes 110mm dia., 6 kg/sqcm & class 3(Page No.134, Item No.1.7 of BWSSB SR 2021-22)	M	45.00	Work done upto the Billed Quantity and the Quality is Satisfactory
58	Providing and fixing gun metal non- return valve of approved quality (screwed end)(V-II Page No.115, Item No.13.6.1.2 of PWD SR 2021-22)	Nos	6.00	Work done upto the Billed Quantity and the Quality is Satisfactory
59	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete(V-II Page No.115, Item No.13.5.2 of PWD SR 2021-22)	Each	4.00	Work done upto the Billed Quantity and the Quality is Satisfactory
60	Providing and fixing PTMT pillar cock of approved quality and colour15 mm nominal bore, 125 mm long foam flow, weighing not less than 120 gms(V-II Page No.118, Item No.13.20.2 of PWD SR 2021-22)	Each	6.00	Work done upto the Billed Quantity and the Quality is Satisfactory
61	Bottle trap 38 mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 263 gms (V-II Page No.129, Item No.14.37.2 of PWD SR 2021-22)	Each	6.00	Work done upto the Billed Quantity and the Quality is Satisfactory
63	Providing and fixing Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using gratings, frames, guard bar, ladder, railings, brackets, structural steel etc. as required. In gates, and similar works including cost of materials, labour, usage charges ofmachinery complete as per specifications and as per directions of the Engineer-in-Charge. (V-2 Page No.82, Item No.11.25.2 of PWD SR 2021-22) Issue Rate On 07-04-22	Kg		Work done upto the Billed Quantity and the Quality is Satisfactory
	Above 125%	Kg	495.00	Work done upto the Billed Quantity and the Quality is Satisfactory

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73	Point wiring using Copper wire without switch Supplying and wiring adopting loop system in existing PVC Conduit/casing capping using 1100V Grade, COPPER conductor flexible multistrand FRLS PVC insulated, 2x1.5 Sq.mm Cable confirming to the GTP without switch, the other end of the wires shall be terminated with sufficient loose lenght in a wood/PVC round block complete for each outlet.(5/2.3) Using class A materials (Page	Point	25.00	Work done upto the Billed Quantity and the Quality is Satisfactory
74	Medium point a above 3mtr up to 6mtr from tapping point to out let via switch (Page No.3, Item No.2.2.2 of PWD Electrical SR 2021-22)	Point	5.00	Work done upto the Billed Quantity and the Quality is Satisfactory
75	Long point a above 6mtr up to 10mtr from tapping point to out let via switch (Page No.3, Item No.2.2.3 of PWD Electrical SR 2021-22)	Point	20.00	Work done upto the Billed Quantity and the Quality is Satisfactory
76	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve , indicator ON/OFF, energy cross-3 with Short 32Amps DP (Page No.13, Item No.5.17 of PWD Electrical SR 2021-22) 6-32Amps SP	Each	12.00	Work done upto the Billed Quantity and the Quality is Satisfactory
77	6-32 Amps DP	Each	18.00	Work done upto the Billed Quantity and the Quality is Satisfactory
78	40 Amps TPN	Each	8.00	Work done upto the Billed Quantity and the Quality is Satisfactory
79	50-63 Amps SP	Each	8.00	Work done upto the Billed Quantity and the Quality is Satisfactory
80	Supplying and fixing regular MCB distribution boards on wall / wood board / flush mounting using required clamps, bolts, nuts etc., with provision for fixing suitable type capacity MCB's single phase / 3 phase / single door with powder coated painting. Made out of 14 SWG MS enclosure,III-Single Door,Group A12Way SP &N (Page No.13, Item No.5.18.4 of PWD Electrical SR 2021-22)	Each	5.00	Work done upto the Billed Quantity and the Quality is Satisfactory
81	Supplying and fixing regular MCB distribution boards on wall/wood board/flush mounting using required clamps, bolts, nuts etc with provision for fixing suitable type capacity MCB's single phase/3 phase/single door with power coated painting etc., complete: Double door: 6 way TP &N , Group (A) (Page No.13, Item No.5.18.12 of PWD Electrical SR 2021-22)	Each	5.00	Work done upto the Billed Quantity and the Quality is Satisfactory
82	Supplying and fixing 32Amps security and energy saving DP switch with key tag suitable to operate on 230 Volts, 50Hz AC supply & completely wired on existing box. (Page No.6, Item No.3.7 of PWD Electrical SR 2021-22)	Each	5.00	Work done upto the Billed Quantity and the Quality is Satisfactory
83	Supplying and flush mounting powder coated / galvanized metal box suitable for mounting modular switch plates. The box should be firmly flush mounted after due groove cutting in Brick/Stone/C.C wall 1-3 Way (Page No.5, Item No 3.4.1 of PWD Electrical SR 2021-22)	Each	25.00	Work done upto the Billed Quantity and the Quality is Satisfactory
84	Supplying and fixing of 20/40 Watts heavy duty open construction Ferromagnetic copper ballast for fluorescent tubes Supplying and fixing of 20/40 Watts heavy duty open construction Ferromagnetic copper ballast for fluorescent tubes, Class H insulated copper wire, Vacuum impregnated high quality with Low loss silicon steel lamination operated on 240V,50Hz supply with IEC 60920 (Safety) & IEC 60921(Performance). Operating voltage	Each	20.00	Work done upto the Billed Quantity and the Quality is Satisfactory
85	Supply and fixing metal fan box with round hook (Page No.2, Item No.1.12 of PWD Electrical SR 2021-22)	Nos	12.00	Work done upto the Billed Quantity and the Quality is Satisfactory

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Assistant Executive Engineer
Executive Engineer
B.B.M.P. Dorthodi-108

86	Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293.(Page No.5, Item No.3.6 of PWD Electrical SR 2021-22)6Amps SP Switch	Each	50.00	Work done upto the Billed Quantity and the Quality is Satisfactory
87	6Amps 3way 5 pin socket	Each	20.00	Work done upto the Billed Quantity and the Quality is Satisfactory
88	16Amps SP Switch	Each	10.00	Work done upto the Billed Quantity and the Quality is Satisfactory
89	32Amps Flush/projected types DP switch	Each	10.00	Work done upto the Billed Quantity and the Quality is Satisfactory
90	Supplying and flush mounting powder coated / galvanized metal box suitable for mounting modular switch plates. The box should be firmly flush mounted after due groove cutting in Brick/Stone/C.C wall (Page No.5, Item No.3.4 of PWD Electrical SR 2021-22) 1-3Way	Each	20.00	Work done upto the Billed Quantity and the Quality is Satisfactory
91	4-5Way	Each	20.00	Work done upto the Billed Quantity and the Quality is Satisfactory
92	6Way	Each	20.00	Work done upto the Billed Quantity and the Quality is Satisfactory
93	8Way	Each	24.00	Work done upto the Billed Quantity and the Quality is Satisfactory
94	10-12Way	Each	16.00	Work done upto the Billed Quantity and the Quality is Satisfactory
95	16Way	Each	4.00	Work done upto the Billed Quantity and the Quality is Satisfactory
96	Supplying and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the existing metal/PVC box. (Page No.5, Item No.3.5 of PWD Electrical SR 2021-22) 1 to 3 Module	Each	20.00	Work done upto the Billed Quantity and the Quality is Satisfactory
97	4Moodule	Each	20.00	Work done upto the Billed Quantity and the Quality is Satisfactory
98	6Moodule	Each	20.00	Work done upto the Billed Quantity and the Quality is Satisfactory

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ವಿದ್ಯುತ್ ಅಭಿಯಂತ್ರಿಕ ಉಪವಿಭಾಗ,
ಪಿ.ಡಬ್ಲ್ಯು.ಡಿ. ಕಾರವಾರ-೫೮

99	8Module	Each	24.00	Work done upto the Billed Quantity and the Quality is Satisfactory
100	10Module	Each	16.00	Work done upto the Billed Quantity and the Quality is Satisfactory
101	12Module	Each	4.00	Work done upto the Billed Quantity and the Quality is Satisfactory
105	Geophysical investigation at site for sinking borewells for supplying drinking water to the habitation either through the Hand Pump MWS or P.W.S.S. by vertical electrical sounding by adopting Veuner orSchlumbergers's method, including reconnaissance survey of geological formation. Geophysical investigation of existing ground water in the vicinity, its quality, quantity and acceptability of the users, indicating the location of the site, recommended depth of casing pipe required to seal the top unconsolidated formation including an extra depth of 1.0 metre in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instruments and accessories to work site, engaging technical personal and labour required etc. NOTE: 1) Additional rate on item 1&2 is allowed for drilling in over burden and fixing Casing pipes beyond 20 M (for fixing Casing pipes only) a) Above 20 M and upto 30 M - 15%, b) Above 30 M - 30% (Measurement of overburden is restricted to the depth of casing pipe fixed excluding initial depth of 20M and projection above ground level). 2) A sum of Rs. 100/- is to be deducted for Dry Borewell towards yield test. (P.151, I.No-4 Code No-O040A) BWSSB SR 2021-22	Nos	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
106	Sinking of Borewell of 165mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burdern upto 20 m. Fixing of casing pipes, collars and cap with necessary cutting, threading and welding including transportation of rig and supporting vehicle, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (Excluding cost of casing pipes, collars, cap etc., complete)(P.151, I.No-1) BWSSB SR 2021-22. 0 to 50 m (Code No-O010A)	m	50.00	Work done upto the Billed Quantity and the Quality is Satisfactory
107	50 to 100 m (Code No-O010B)	m	50.00	Work done upto the Billed Quantity and the Quality is Satisfactory
108	100 to 150 m (Code No-O010C)	m	50.00	Work done upto the Billed Quantity and the Quality is Satisfactory
109	150 to 200 m (Code No-O010D)	m	50.00	Work done upto the Billed Quantity and the Quality is Satisfactory
110	200 to 250 m (Code No-O010E)	m	50.00	Work done upto the Billed Quantity and the Quality is Satisfactory
111	250 to 300 m (Code No-O010F)	m	39.00	Work done upto the Billed Quantity and the Quality is Satisfactory

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113	Supply of ISI mark 175mm nominal bore,plain and steel casing pipe grade of steel Fe 410 of wall thickness conforming to IS 4270-2001 and latest ammendments, electrical resistance welded steel tubes, material and conforming to IS 1387-1993 and manufactured by basic open hearth electric or basic oxygen process in random length of 5-7m both ends threaded conforming to IS 554-1985 one end fixed with socket conforming to IS 4270-2001 and the other end with screwed pipes all shall be responsibaly free from defects. The tubes shall be responsible straight end should be with ISI marking weighing 25.10kg/m prices include Collar-Mednum duty	Rmtr	70.00	Work done upto the Billed Quantity and the Quality is Satisfactory
115	PVC pipe - OD 250mm and 6 Kg/sqcm	Rmtr	6.00	Work done upto the Billed Quantity and the Quality is Satisfactory
116	Supplying and drawing 3 core flat PVC sheathed submersible pump cable manufactured with electrolytic grade copper withflexible copper with low resistance conductor conforming to13:8130-1984 and virgin grade PVC insulation and powdercoating extruded PVC sheathed suitable for working voltageupto 1100 V as per IS-694-2010. 3C x 6 mm2	Mtr	456.00	Work done upto the Billed Quantity and the Quality is Satisfactory
117	Providing,supplying to work site, Submersible Pump Set of 150mm dia suitable for bore well and confirming to IS 8034-2000,3Phase, SS Bowl & Impeller with Low volt Motor as per specifications,as per necessary ammendments and instructions of engineer incharge of work. 15.00 HP - 120 LPM @ 266 m = 23 STG Outlet Dia - 2.00"(	Nos	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
118	Earthing: Supplying and fixing and wiring earth electrode for grounding circuits IC conuits and other equipments on the meter board in the pit. The pits should be filled up with equal proportion of salt and charcoal 150mm around the pipe to complete depth. The connection from the pipe to the conduits etc. is to established through GI wire of sizes as per clause 7.3.3 of IS 732 using 12mm bolts, nuts, washers and check nuts, the pipe shall have 16 through holes of 12mm dia. (P. No.164, I. No. 45, BWSSB SR 2021-22)	job	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
119	Supply and fixing polished wood board made of not lessthan 15mm thick plank on both sides of not more than 2pieces and fixing the same to the wall using tapered inserted wooden plugs screws. 20" x 20" x 2.5" (P No. 10 No.5.6.6,Part-I Electrical SR 2021-22)	Each	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
120	Supplying & fixing of Porcelain fuse channel with cut out onexisting wooden panel using necessary nuts, bolts andwashers. 63 A (P No. 10 No.5.6.6,Part-I Electrical SR 2021-22)	Each	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
121	Supplying & fixing miniature circuit breakers on existingMCB distribution boards using necessary fixing materialsand 'C' Type curve, indicator ON/OFF, energy cross-3 withShort circuit breaking capacity of 10K and complete wiring asrequired confirming to IEC 60898. 50-63 A TPN	Each	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
122	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such similar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work Loading and Unloading of Stone Boulder/Stone aggregates/ Sand/Kankar/Moorum.	Cum	10.80	Work done upto the Billed Quantity and the Quality is Satisfactory
123	Supplying and filling in plinth with sand under floors, foundation of Bridges including watering, ramming, consolidating and dressing complete.	Cum	3.60	Work done upto the Billed Quantity and the Quality is Satisfactory

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124	Supplying PVC ringfite pipes conforming to IS 4985:2000 with latest amendments and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading unloading at both locations and cuts of pipes wherever necessary including jointing of PVC pipes and specials (excluding cost of specials) with jointing of approved type, with all labour with all lead & lift including encasing the pipe alround to a depth of not less than 15 cms with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing) etc.63mm outer dia, 6kg/sqcm & class 3 for.	Mtr	40.00	Work done upto the Billed Quantity and the Quality is Satisfactory
125	Refilling available earth around trenches/pipelines, cables in layers not exceeding 20 cms in depth, compacting each deposited layer by ramming after watering with a lead upto 50 m, and lift upto 1.5 m. Including cost of all labour complete as per specifications	Cum	10.80	Work done upto the Billed Quantity and the Quality is Satisfactory
126	Supplying fully automatic star-delta starter unit push buttontype with suitable wires, 3 contactors, one adjustablethermal tumer mounted on a common base plate hold in steel enclosure for use on 400/440 V 3 phase and wired after fixingto the existing wooden board for motor. Above 12.5 HP upto 25 HP	Nos	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
E1	Fabricating supplying and mounting MS box of 16 SWG suitable for floor /wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clA with accessary cable entry pipe with gland and box should be finished with 7tanks treatment with powder coated paint and finally finished with approved colour etc., complete and as per the directions of the Engineer-in-charge of the work	Sq cm	22000.00	Work done upto the Billed Quantity and the Quality is Satisfactory
E2	Labour charges for erection of outdoor type panel board and meter boardunits with all accessary materials and labour, tools and equipments including providing cement concrete foundation bed etc., complete as per specification, with testing of as per instructions and as per the directions of the Engineer-in-charge of the work	Job	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
E3	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete cutting road surfaces and as per the directions of the Engineer-in-charge of the work	Mtr	25.00	Work done upto the Billed Quantity and the Quality is Satisfactory

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E4	Earthing: Supplying and fixing and wiring earth electrode for grounding circuits IC cutouts and other equipments on the meter board in the pit. The pits should be filled up with equal proportion of salt and charcoal 150mm around the pipe to complete depth. The connection from the pipe to the conduits etc. is to established through GI wire of sizes as per clause 7.3.1 of IS 732 using 12mm bolts, nuts, washers and check nuts, the pipe shall have 16 through holes of 12mm dia and as per the directions of the Engineer-in-charge of the work	Job	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
E5	Supply and delivery at site of brand new best make gate valve as per IS 778/1984 with ISI Mark and as per its latest amendments Size 50 mm and as per the directions of the Engineer-in-charge of the work	Each	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
E6	Supply and delivery at site of brand new best make non-return valve as per IS 778/1984 with ISI Mark and as per its latest amendments Size 50 mm and as per the directions of the Engineer-in-charge of the work	Each	1.00	Work done upto the Billed Quantity and the Quality is Satisfactory
E7	Supplying, laying and jointing HDPE pipes of specified grade andconforming to IS 4984-2016 with latest ammendments and conveying to work site including loading and unloading at both destinations and rolling and lowering into trenches, laying true to line and jointing of pipes and specials with electrofusion welding, giving hydraulic test as per relevant ISS with all lead and lifts including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth availablefrom the excation, testing and commissioning. The rate is exclusive of required specials and fittings wherever necessary like saddle Tee, stub ends, flanged sets, bodns, reducers etc. complete (Contractor will make his own arrangements for procuring water for testing) etc. Note: Upto 110mm dia Coil shall be used.For Grade PE80 PN16.0 63 mm Dia	Mtr	228.00	Work done upto the Billed Quantity and the Quality is Satisfactory

With respect to the above subject & name of the work, we have inspected the work and the Quantity and Quality of above mentioned items of the work was found to be completed satisfactorily for the Fourth and Final bill

Thanking you,

Yours regards,

For M/s Nivetech Infra Solutions Pvt. Ltd.

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ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು (ಸಾಮಾನ್ಯ)
ಮೆಸ್ಕಾಂ ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರರ ಕಛೇರಿ,
ಮೆ.ಇ.ಕ.ಪ. ಮೈಸೂರು-೧೦